The Honorable Commissioner of Patents
and Trademarks   Page 9

REMARKS

The present application contains claims 1- 24, 26 and 28- 30.

The Examiner allowed claim 26.

The Examiner stated that Applicant has not argued or commented on the Office Action dated October 3, 2003. Applicant provides remarks and arguments related to claim rejections under 35 USC paragraph 102 and 103 in this Response.

In the Response to Office Action, dated March 1, 2004, Applicant has amended the claims of the present application to overcome the objections and rejections raised by the Examiner in the Office Action dated October 3, 2003. Therefore, no amendment has been made in this Response. Accordingly, the status identifier in the claims has been changed to 'previously presented'. For easy reference to the amendments made in Response to Office Action, dated March 1, 2004, the underlines, strikethroughs and the bracket in the claims have been kept.

The Examiner rejected claims 1, 10- 12, 14, 22-23 and 28-29 under 35 U.S.C. 102 as being anticipated by Hamilton et al. (US Patent No. 6,392,993), hereafter Hamilton.

Applicant respectfully disagrees and transverses the Examiner's rejections.

The present invention, as claimed by the amended claims, is for controlling congestion where a TCP connection is established for transmitting data in TCP. Claims 1, 11 and 22 are independent claims. Claims 28- 29 are system claims corresponding to claims 1 and 11, respectively.

According to claim 1, a receiver sends a NAK to a transmitter when it detects a missing data packet, and the transmitter decrease a congestion window in response t o a receipt of the NAK.

According to claim 11, a receiver sends a NAK to a transmitter when it detects a missing data packet, and then sets a missing- packet timer. When the time is expired and the missing data packet has not been received, the receiver sends a further NAK to the

The Honorable Commissioner of Patents
and Trademarks   Page 10

transmitter.

Round-trip time (RTT) is a measure of the time it takes for a packet to travel. Transport protocols like TCP which expect an acknowledgment to arrive after data has been successfully received, keep an estimate of the current RTT on each connection. UDP does not have RTT.

According to claim 22, a transmitter sets a (TCP) round-trip timer on sending a sequence of data packets, and adjusts a congestion window in response to receipt of the NAK and expire of the round-trip timer.

As described on col. 7, lines 53-55, the objection of Hamilton is for achieving efficiency and reliability by building high-level protocols upon a basic UDP multicast protocol. Since UDP is inherently unreliable, reliability is added by layering additional protocols upon UDP, i.e. a statistical reliability mode or a positive reliability mode. As described on col. 10, lines 38-41, packets are encapsulated within UDP packets. Generally, UDP is used in place of TCP when a reliable delivery is not requ ired. In UDP, lost packets are simply ignored, because there is no time to retransmit. Hamilton has added acknowledgement (ACK, NAK) functionality for adding reliability to transmit data in a UDP multicast. Thus, the present invention, in which ACK functionality is deleted in TCP, is quite different from Hamilton. Hamilton neither discloses nor suggests the subject matters of the present invention.

The Examiner further rejected claims 2, 9 and 13 under 35 U.S.C. 103(a) as being unpatentable over Hamilton and in view of Sen et al. (US Patent No. 6,208,620,). The Examiner further rejected claim 3 under 35 U.S.C. 103(a) as being unpatentable over Hamilton and in view of Gersht et al. (US Patent No. 6,405,257). The Examiner further rejected claims 4-6, 15-16, 19, 25, and 30 under 35 U.S.C. 103(a) as being unpatentable over Hamilton and in view of Kumar (US Patent No. 6,269,080), hereafter Kumar. The Examiner further rejected claim 7 under 35 U.S.C. 103(a) as being unpatentable over Hamilton and in view of Natarajan et al. (US Patent No. 6,538,988), hereafter Natarajan. The Examiner further rejected claim 17 under 35 U.S.C. 103(a) as being unpatentable over Hamilton, in view of Kumar, and further in view of Dudley et al. (US Patent No. 5,754,754). The Examiner further rejected claim 20 under 35 U.S.C. 103(a) as being

The Honorable Commissioner of Patents
and Trademarks   Page 11

unpatentable over Hamilton, in view of Kumar, and further in view of Natarajan. The Examiner further rejected claims 24 and 27 under 35 U.S.C. 103(a) as being unpatentable over Hamilton, and further in view of Chien et al. (US Patent No. 5,815,667).

Applicant respectfully disagrees and transverses the Examiner's rejections.

As stated above, Hamilton and the other cited references neither disclose nor suggest the subject matters of the present invention. Therefore it would not be obvious to a person skilled in the art to combine Hamilton and the other cited prior art to come to the claimed invention.

Applicant respectfully requests reconsideration of this application, based on the foregoing remarks.

                                          Respectfully Submitted,

                                          John D. Harris
                                          Registration No. 39,465

JDH/SM/cw
c/o   GOWLING LAFLEUR HENDERSON LLP
            160 Elgin Street, Suite 2600
            Ottawa, Ontario
            K1P 1C3
            CANADA

Telephone: (613) 233-1781
Facsimile: (613) 563-9869

Date: JULY 5, 2004